Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (currently amended) ~~Unknown;Dana Pettigrew;~~ A variable frequency power system for starting and powering an electrical motor load comprising:

a power source with a rotating output, said power source having a speed control to regulate rotational speed of said rotating output, said rotational speed of said rotating output being rotational frequency of said rotating output;

a generator coupled to and driven by said rotating output of said power source, whereby speed control of said power source directly controls output power frequency of said generator to produce a desired output frequency from said generator due to control of rotational frequency of said rotating output;

a voltage regulator connected between said generator and the motor to regulate output voltage emanating from said generator for a supply voltage to an electrical motor load; and

a system controller to control output power frequency of said generator to be said desired output frequency, said system controller connected to interface with said speed control of said power source; said system controller configured to monitor generator output and operational conditions of said electrical motor load, said system controller configured to adjust said speed control of said power source based on generator output and operational conditions of said electrical motor load to maintain said desired output frequency.

2. (original) The variable frequency power system of claim 1, wherein said power source is an engine powered by a fuel source.

3. (original) The variable frequency power system of claim 1, further including an uninterruptible power supply to power electronics of said variable frequency power system independently of said generator.

4. (original) The variable frequency power system of claim 1, wherein said voltage regulator is an excitation controller which includes programmable logic so that voltage is adjusted according to rotational frequency of said engine and said generator.

5. (currently amended) The variable frequency power system of claim 1, wherein said generator is configured as a multi-tap voltage generator.

6. (original) The variable frequency power system of claim 1, wherein said motor is connected to an electrical submersible pump.

7. (original) The variable frequency power system of claim 1, further including a transformer between said generator and said electrical motor load.

8. (original) The variable frequency power system of claim 1, further including a switchboard connected between said generator and said electrical motor load to act as a shutdown switch between said generator and said motor, said switchboard controlled by said system controller.

9. (currently amended) The variable frequency power system of claim 1, wherein said power source is an engine powered by a fuel source; and further including an uninterruptible power supply to power electronics of said variable frequency power system independently of said generator.

10. (original) The variable frequency power system of claim 9, wherein said voltage regulator is an excitation controller which includes programmable logic so that voltage is adjusted according to rotational frequency of said engine and said generator.

11. (original) The variable frequency power system of claim 9, further including a transformer between said generator and said electrical motor load.

12. (original) The variable frequency power system of claim 9, further including a switchboard connected between said generator and said motor to act as a shutdown switch between said generator and said motor, said switchboard controlled by said system controller.

13. (currently amended) A method of controlling power and frequency of power supplied to an electrical motor load, using a variable frequency power system including a power source with a rotating output, the power source having a speed control to regulate rotational speed of the rotating output, the rotational speed of the rotating output being rotational frequency of the rotating output; a generator coupled to and driven by the rotating output of the power source, whereby speed control of the power source directly controls output power frequency of the generator to produce a desired output frequency from said generator due to control of rotational frequency of the rotating output; a voltage regulator connected between the generator and the motor to regulate output voltage emanating from the generator; and a system controller to control output power frequency of the generator to be the desired output frequency, the system controller connected to interface with the speed control of the power source; the system controller configured to monitor generator output and operational conditions of the motor, the system controller configured to adjust the speed control of the power source based on generator output and operational conditions of the motor to maintain the desired output frequency, comprising:

determining the proper frequency of power output from the generator which is required by the motor; and

adjusting the speed of the power source to adjust the frequency of the power output of the generator by using the system controller to manipulate the speed control of the power source while monitoring the frequency of the power outputted from the generator, thereby controlling the frequency of the power outputted by the generator.

14. (original) The method of claim 13, wherein said power source is an engine power by a fuel source.

15. (original) The method of claim 13, further including an uninterruptible power supply to power electronics of said variable frequency power system independently of said generator.

16. (currently amended) The method of claim 13, further including monitoring operating conditions of a unit driven by the motor and adjusting the speed of the power source to adjust the frequency of the power output of the generator to the desired output frequency based on required power needs of the unit driven by the motor.

17. (original) The method of claim 13, further including using the system controller to control a startup sequence to start the power source and generator combination by running the power source at idle with no load from the motor for a specified warm-up period, once warm-up is achieved, using the system controller to adjust the rotational output of the power source to a starting frequency, then using the system controller to adjust the rotational output of the power source to full speed, when the power source ramps up in rotational speed and reaches roughly half final operating rotational speed, using the system controller to engage power from the generator to the motor.

18. (original) The method of claim 17, further including monitoring operating conditions of a unit driven by the motor and adjusting the speed of the power source to adjust the frequency of the power output of the generator based on required power needs of the unit driven by the motor.

19. (currently amended) The method of claim 13, wherein power is transferred ~~engaged~~ from the generator to the motor when the rotational speed of the rotational output of the power source is at about thirty Hertz.

20. (currently amended) The method of claim 13, further including using the system controller to control a startup sequence of the power source and generator combination by running the power source at idle with no load from the motor for a specified warm-up period, once warm-up is achieved, increasing the rotational speed of the rotating output of the power source to a steady operating frequency slightly below full operating frequency the power source while regulating output voltage from the generator at a reduced output voltage using the voltage regulator, using the system controller to engage the power from the generator to the motor while holding the output voltage fixed at the reduced voltage regardless of change in rotational speed of the power source, after a given period of time elapses, ~~the~~ using the system controller to command the voltage regulator to ramp up the output voltage of the generator to achieve the required ~~volts~~ voltage to ~~hertz~~ frequency ratio required by the motor, finally waiting until the system reaches steady operation before bringing the power source to the final operational speed.

21.(original) The method of claim 20, wherein the rotational speed of the rotating output of the power source before engaging power to the motor is set for the steady operating frequency is approximately around five-sixths of full operating frequencies.

22. (original) The method of claim 20, wherein the reduced output voltage is about fifty to ninety percent the rated voltage required by the motor.

23. (original) The method of claim 20, further including monitoring operating conditions of a unit driven by the motor and adjusting the speed of the power source to adjust the frequency of the power output of the generator based on required power needs of the unit driven by the motor.

24. (currently amended) The method of claim 13, further including using the system controller to control a startup ~~sequence starting~~ sequence where normal operating range of the

motor will be in a range of forty to sixty Hertz and a set point of the desired operational frequency of the outputted power is selected in the system controller, using the system controller to return the power source to an idle speed after initial warm up and then setting the rotational speed of the power source at a higher set speed level~~, As~~ so that the power source gains speed and gets up to a speed of about thirty Hertz, ~~then engage~~ before power is transferred from the generator to the motor.

25. (original) The method of claim 24, further including monitoring operating conditions of a unit driven by the motor and adjusting the speed of the power source to adjust the frequency of the power output of the generator based on required power needs of the unit driven by the motor.

26. (currently amended) The method of claim 13, further including using the system controller to control a startup sequence of the power source and generator combination where the normal operating range of the motor will be in a range of fifty to sixty Hertz range and a set point of the desired operational frequency of the outputted power is selected in the system controller, using the system controller to set the rotational speed of the power source such that the rotational speed is sufficient to prevent stalling of the power source while the power source picks up motor load when the power is ~~engaged~~ transferred from the generator to the motor and allowing the power source to recover and return to the ~~required~~ desired operational frequency setting ~~of the Hertz~~ selected for the power to be generated to the motor.

27. (original) The method of claim 26, further including monitoring operating conditions of a unit driven by the motor and adjusting the speed of the power source to adjust the frequency of the power output of the generator based on required power needs of the unit driven by the motor.

28. (original) The variable frequency power system of claim 1, wherein said motor is connected to an electrical centrifugal pump.

29. (original) The variable frequency power system of claim 1, wherein said motor is connected to an electrical fan.

30. (original) The variable frequency power system of claim 1, wherein said motor is connected to an electrical gas compressor pump.